

Chemical for Developmental and Reproductive Toxicant Identification Committee (DART IC) Review Consideration:

Particulate Matter

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Evidence available for prioritization of *Particulate Matter*

Particulate Matter (PM) is of particular concern as an air pollutant, where it occurs in combination with other chemicals of concern such as sulfur dioxide and carbon monoxide.



PM: Epidemiologic Data

- Thirty epidemiologic studies reporting increased risk of adverse developmental or reproductive outcomes were identified.
- Four meeting abstracts reporting increased risk of adverse developmental or reproductive outcomes were also identified.
- Four epidemiologic studies reporting no increased risk of adverse developmental or reproductive outcomes were identified, of which two were meeting abstracts.
- Twelve related articles were also identified.



PM: Epidemiologic Effects

- low birth weight (both pre and term-born infants)
- intrauterine growth retardation
- preterm birth



PM: Animal Data

- Eleven animal studies reporting reproductive or developmental toxicity were identified.
- Two studies reporting no reproductive or developmental toxicity.
- Three related articles were also identified.



PM: Animal Effects

- Rats: Suppresses testicular function, especially spermatogenesis and sperm motility.
- Mice: Can influence glutathione oxidation-deoxidation system (GSH) and cause DNA damage in male reproductive system; may affect development of the oocyte.

